



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

01/07/2008

Directv Group Inc  
Re R11 A109  
PO Box 956  
El Segundo, CA 90245

EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 01/07/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,632	04/25/2005	Ernest C Chen	PD-202130	1632

TITLE OF INVENTION: LOWER COMPLEXITY LAYERED MODULATION SIGNAL PROCESSOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	04/07/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# Notice of Allowability

Application No.

10/532,632

Examiner

Emmanuel Bayard

Applicant(s)

CHEN ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/19/07.
2. ☒ The allowed claim(s) is/are 1-42, 45, 47-49, 53, 55-57, 61 and 63.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**

This is in response to RCE filed on 10/19/07 in which claims 1-42, 45, 47-49, 53, 55-57, 61 and 63 are pending. The applicant's amendments have been fully considered therefore this case is in condition for allowance. In addition the pending claims have been renumbered as 1-52 respectively.

***Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance: the prior arts of record fail to anticipate or render obvious the following recited features: assigning first symbols to the upper layer signal portion of the encoded combined upper layer signal and the lower layer signal and assigning second symbols to the upper layer signal portion of the encoded combined upper layer signal and the lower layer signal and delaying the first symbols as recited in claims 1, 9 and 17. Delaying the input signal; demodulating the delayed input signal to produce a lower layer signal; combining the upper layer signal and the lower layer signal; and decoding the combined upper layer signal and the lower layer signal as recited in claims 25, 31 and 37. Re-encoding and remodulating the upper layer signal; extracting the lower layer signal from the input signal by subtracting the re-encoded and remodulated upper layer signal from the input signal as recited in claims 45, 48, 53, 56 and 61.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2611

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamaguchi et al U.S. Pub No 2002009141 A1 teaches a video encoding and decoding apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

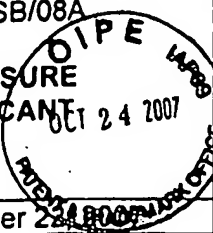
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

1/2/2008

  
EMMANUEL BAYARD  
Patent Examiner  
Art Unit 2611

Substitute for form PTO/SB/08A		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> 		Application Number	10/532,632
		Filing Date	04-25-2005
		First Named Inventor	Ernest Chen
		Art Unit	2611
		Examiner Name	BAYARD, Emmanuel
Date:	October 24, 2007		
Sheet 1 of 1	Attorney Docket Number	PD-202130	

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
/E.B./	1	US-7,079,585	07-2006	Settle et al.
	2	US-7,073,116	07-2006	Settle et al.
	3	US-5,978,652	11-1999	Burr et al.
	4	US-6,947,741	09-2005	Beech et al.
	5	US-6,657,978	12-2003	Millman, Richard M.
	6	US-6,177,836	06-2001	Young et al.
	7	US-5,206,889	04-1993	Unkrich, Mark A.
	8	US-7,209,524	04-2007	Chen, Ernest C.
	9	US-2005/0037724	02-2005	Walley et al.
	10	US-2003/0043941	03-2003	Johnson et al.
	11	US-2004/0196935	10-2004	Nieto, John Wesley
	12	US-4,484,337	11-1984	Leclert et al.
	13	US-2004/0137863	07-2004	Walton et al.
	14	US-7,041,406	05-2006	Schuler et al.
	15	US-6,999,510	02-2006	Batruni, Roy G.
	16	US-6,314,441	11-2001	Raghunath, Kalavai Janardhan
	17	US-6,104,747	08-2000	Jalloul et al.
	18	US-7,239,876	07-2007	Johnson et al.
	19	US-5,513,215	04-1996	Marchetto et al.
	20	US-6,377,116	04-2002	Mattsson et al.
/E.B./	21	US-6,809,587	10-2004	Ghannouchi et al.

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T
/E.B./	22	WO 99/00957	01-1999	Thomson Consumer Electronics	

### ALLOWED CO-PENDING RELATED APPLICATIONS

Examiner Initials*	Cite No.	Application Number	Filing Date	Applicant(s)	Date of Notice of Allowance
/E.B./		10/692,491	10-24-2003	Ernest C. Chen	09-06-2007
/E.B./		11/603,776	11-22-2006	Chen et al.	08-29-2007

Examiner Signature	/Emmanuel Bayard/	Date Considered	01/02/2008
--------------------	-------------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute for form PTO/SB/08A  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	<b>Complete if Known</b>	
	Application Number	10/532,632
	Filing Date	April 25, 2005
	First Named Inventor	Ernest Chen
	Art Unit	2611
Examiner Name	BAYARD, Emmanuel	
Date:	August 22, 2007	
Sheet 1 of 1	Attorney Docket Number	PD-202130

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.B./	1	US-6,678,336	01-2004	Katoh et al.	
/E.B./	2	US-6,990,627	01-2006	Uesugi et al.	
/E.B./	3	US-7,230,992	06-2007	Walker et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
/E.B./	4	JP 2002118611 (English abstract)	04-2002	Sharp KK		

NON PATENT LITERATURE DOCUMENTS				T
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
/E.B./	5	PALICOT, J., VEILLARD, J.; "Possible Coding and Modulation Approaches to Improve Service Availability for Digital HDTV Satellite Broadcasting at 22 GHz"; IEEE Transactions on Consumer Electronics; Vol. 39, Issue 3; August 1993; pages 660-667		

ALLOWED CO-PENDING RELATED APPLICATIONS				
Examiner Initials*	Application Number	Filing Date	Inventor(s)	Notice of Allowance Date
/E.B./	10/693,135	10-24-2003	Chen	June 20, 2007

Examiner Signature	/Emmanuel Bayard/	Date Considered	09/15/2007
--------------------	-------------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

JAN 29 2007

Substitute for form PTO/SB/08A  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	Complete if Known	
	Application Number	10/532,632
	Filing Date	April 25, 2005
	First Named Inventor	Ernest Chen*
	Art Unit	2811
	Examiner Name	BAYARD, Emmanuel
Date: January 29, 2007		
Sheet 1 of 1	Attorney Docket Number	PD-202130

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.B./		US-2006/0013333	01-2006	Chen, Ernest C.	
/E.B./		US-6,369,648	04-2002	Kirkman, George F.	
/E.B./		US-6,477,398	11-2002	Mills, Randell L.	
/E.B./		US-3,076,180	01-1963	Havens et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T

Examiner Signature	/Emmanuel Bayard/	Date Considered	01/02/2008
--------------------	-------------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Substitute for form PTO/SB/08A  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	<b>Complete if Known</b>	
	Application Number	10/532,632
	Filing Date	April 25, 2005
	First Named Inventor	Ernest Chen
	Art Unit	2611
Date: July 30, 2007	Examiner Name	BAYARD, Emmanuel
Sheet 1 of 1	Attorney Docket Number	PD-202130

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.B./	1	US-5,285,474	02-1994	Chow et al.	
↓	2	US-6,002,713	12-1999	Goldstein et al.	
↓	3	US-6,078,645	06-2000	Cai et al.	
/E.B./	4	US-6,313,885	11-2001	Patel et al.	

U.S. PUBLICATION DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/E.B./	5	US-2002/0186761	12-2002	Corbaton et al.	
↓	6	US-2003/0171102	09-2003	Yang, Bin	
↓	7	US-2004/0013084	01-2004	Thomas et al.	
↓	8	US-2004/0091059	05-2004	Chen, Ernest C.	
↓	9	US-2006/0022747	02-2006	Chen et al.	
/E.B./	10	US-2006/0045191	03-2006	Vasanth et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number-Kind Code	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T
/E.B./	11	EP 1065854	01-2001	Tandberg Television ASA	
/E.B./	12	WO 01/39455	05-2001	Thomson Licensing SA	
/E.B./	13	KR 2001 0019997 (English abstract included)	03-2001	Hynix Semiconductor Inc.	

Examiner Signature	/Emmanuel Bayard/	Date Considered	01/02/2008
--------------------	-------------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**Notice of References Cited**

Application/Control No.

10/532,632

Applicant(s)/Patent Under  
Reexamination  
CHEN ET AL.

Examiner

Emmanuel Bayard

Art Unit

2611

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0009141	01-2002	Yamaguchi et al.	375/240.11
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.